Engineering Plastics
Polybutylene Terephthalate

PBT 1100-104S
Technical Data

CCP PBT 1100-104S
PBT unreinforced middle viscosity injection molding grade.

Characteristics
1) excellent electrical property
2) excellent temperature resistance, high heat distortion temperature.
3) excellent mechanic and chemical property
4) excellent weatherability
5) excellent wear property
6) excellent moldability
7) high resistance to fuels, oil, fats and many solvents.

Injection Molding Condition

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cylinder temperatures</td>
<td>230-260°C</td>
</tr>
<tr>
<td>Nozzle temperature</td>
<td>245-250°C</td>
</tr>
<tr>
<td>Mold temperature</td>
<td>30-100°C; suitable temperature 40-60°C</td>
</tr>
<tr>
<td>Injection rate</td>
<td>middle</td>
</tr>
<tr>
<td>Screw speed</td>
<td>60-120 rpm; to be chosen in such a way that plasticizing time is just within cooling time</td>
</tr>
<tr>
<td>Pressure</td>
<td></td>
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<tr>
<td>Injection pressure</td>
<td>500-1000 kg/cm²</td>
</tr>
<tr>
<td>Holding pressure</td>
<td>300-700 kg/cm²</td>
</tr>
<tr>
<td>Back pressure</td>
<td>0-3 kg/cm²</td>
</tr>
<tr>
<td>Mold shrinkage</td>
<td>Mold shrinkage 1.6 mm thickness is 1.2-1.8 % under the test method ASTM D955</td>
</tr>
</tbody>
</table>

Packaging
25 kg/paper bag or 850 kg/super sack.

Material handling
Moisture pick-up from ambient air should be avoided. Keep hopper properly closed.
### Property | Value | Unit | Test method | ASTM
--- | --- | --- | --- | ---
Melting Index \( (250^\circ C \times 2.16 \text{kg}) \) | 18〜22 | g/10min | D1238
Specific gravity | 1.31 | - | D792
Melting point | 225 | °C | DSC
Coef. of linear thermal expansion | 9 | \( 10^{-5} \text{cm/cm}^\circ \text{C} \) | D696
Heat deflection temperature under load
--- \( 18.6 \text{ kg/cm}^2 \) | 60 | °C | D648
--- \( 4.6 \text{ kg/cm}^2 \) | 155 | °C | D648
Moisture absorption (24h) | 0.06 | % | D570
Flammability acc. To UL94 (1.6 mm) | HB | - | UL94
Tensile strength | 570 | kg/cm² | D638
Tensile elongation | 50 | % | D638
Flexural strength | 880 | kg/cm² | D790
Flexural modulus | 25000 | kg/cm² | D790
Izod impact strength - notched 1/4" | 2.8 | kg-cm/cm | D256

Dielectric strength, 2 mm thickness | 20 | KV/mm | D149
Volume resistivity | \( 10^{15} \) | Ω-cm | D257
Surface resistivity | \( 10^{13} \) | Ω | D257
Dielectric constant | 3.3 | 60Hz | D150
Dielectric dissipation factor | 0.001 | 60Hz | D150
Arc resistance | 120 | SEC | D495

(1) For reference only
(2) All data in the table are the typical values of the material and not the minimum values of the material specifications.